

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A voltage generating circuit comprising:

a first transistor which allows a first current to flow in an emitter thereof;

a second transistor which allows a second current which has having a current density larger than a current density of the emitter of the first transistor to flow in an emitter thereof;

a first resistance which is provided between the emitter of the first transistor and the emitter of the second transistor;

a second resistance which is provided between the emitter of the second transistor and a ground potential of the voltage generating circuit;

a third resistance which is provided between a collector of the first transistor and a power source voltage;

a fourth resistance which is provided between a collector of the second transistor and the power source voltage; and

a differential amplifier circuit having ~~the-a~~ CMOS constitution which forms an output voltage upon receiving a collector voltage of the first transistor and a collector voltage of the second transistor, ~~and, at the same time,~~ ~~which supplies the output voltage to bases of the first~~ transistor and the second transistor in common,

wherein the first transistor and the second transistor are constituted by making ~~us-use~~ of a semiconductor region formed in a CMOS process associated with ~~of~~ a CMOS circuit which constitutes the differential amplifier circuit.

2. (Original) A voltage generating circuit according to claim 1, wherein the third resistance and the fourth resistance are configured to possess a same resistance value.

3. (Original) A voltage generating circuit according to claim 2, wherein an emitter area of the first transistor is set larger than an emitter area of the second transistor.

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4. (Cancelled)

5. (Currently Amended) A semiconductor integrated circuit device including a reference voltage generating circuit, the reference voltage generating circuit comprising: which comprises:

a first transistor which allows a first current to flow in an emitter thereof;

a second transistor which allows a second current which has having a current density larger than a current density of the emitter of the first transistor to flow in an emitter thereof;

a first resistance which is provided between the emitter of the first transistor and the emitter of the second transistor;

a second resistance which is provided between the emitter of the second transistor and a first external terminal which supplies a ground potential of the circuit; which is supplied from an external terminal;

a third resistance which is provided between a collector of the first transistor and a second external terminal which supplies a power source voltage; which is supplied from an external terminal;

a fourth resistance which is provided between a collector of the second transistor and the ~~power source voltage~~ second external terminal; and

a differential amplifier circuit having ~~the-a~~ CMOS constitution which forms an output voltage upon receiving a collector voltage of the first transistor and a collector voltage of the second transistor, and, ~~at the same time,~~ which supplies the output voltage to bases of the first transistor and the second transistor in common,

wherein the first transistor and the second transistor are constituted by ~~making use of~~ using a semiconductor region formed in a CMOS process of a ~~CMOS circuit which constitutes~~ associated with the differential amplifier circuit.

6. (Currently Amended) A semiconductor integrated circuit device according to claim 5, ~~wherein the semiconductor integrated circuit device which includes a CMOS circuit which is constituted of~~ having a second conductive-type well region and a first conductive-type well region ~~which are formed on a first conductive-type semiconductor substrate, a first conductive-type MOSFET which is formed on the second conductive-type well region,~~

and a second conductive-type MOSFET which is formed on the first conductive-type well region, and

wherein each of the first transistor and the second transistor which constitute of the reference voltage generating circuit are-is formed of a bipolar transistor having the-a lateral structure which uses-with collector, emitter, and base portions being constituted by diffusion layers which are-formed on respective portions of a first conductive-type well arrangement, the diffusion layers of the collector and emitter portions being formed in a step for forming source and drain diffusion layers of the second conductive-type MOSFET. ~~which constitutes the CMOS circuit as the collector and the emitter and is operated using the first conductive-type well region on which the diffusion layers which constitute the collector and the emitter are formed as a base.~~

7. (Currently Amended) A semiconductor integrated circuit device according to claim 5, wherein the semiconductor integrated circuit device which includes the-a CMOS circuit which is constituted of the having a second conductive-type well region and the-a first conductive-type well region which are-formed on the-a first conductive-type semiconductor substrate, the-a first conductive-type MOSFET

~~which is formed on the second conductive-type well region, and a~~ ~~the~~ second conductive-type MOSFET which is formed on the first conductive-type well region, and

wherein the second conductive-type well region ~~having a depth for electrically separating~~ separates the first conductive-type well region on which the second conductive-type MOSFET is formed from the first conductive-type semiconductor substrate, and

wherein each of the first transistor and the second transistor are ~~is~~ formed of a bipolar transistor having ~~the~~ a vertical structure ~~which with uses~~ a second conductive conductive-type diffusion layer, which is formed in a step for forming source and drain diffusion layers of the ~~first~~ second conductive-type MOSFET, which constitutes the CMOS circuit as ~~the as an~~ emitter portion, uses ~~the with a~~ portion of a first conductive-type well-region arrangement, on which the second conductive-type diffusion layer ~~which constitutes constituting~~ the emitter portion is formed, as a base portion, and ~~uses the with a~~ portion of a second conductive-type well arrangement, ~~region having a depth which is provided for~~ which electrically separating separates said portion of the first conductive-type well arrangement ~~region which constitutes the base from the first~~

conductive-conductive-type semiconductor substrate, as a collector portion.

8. (Currently Amended) A semiconductor integrated circuit device according to claim 5, wherein the semiconductor integrated circuit device includes which includes a CMOS circuit which is constituted of having a second conductive-type well region and a first conductive-type well region which are formed on a second conductive-type semiconductor substrate, a first conductive-type MOSFET which is formed on the second conductive-type well region, and a second conductive-type MOSFET which is formed on the first conductive-type well region, and wherein each of the first transistor and the second transistor which constitute of the reference voltage generating circuit are is formed of a bipolar transistor having the a lateral structure which uses with collector, emitter, and base portions being constituted by diffusion layers which are formed on respective portions of a first conductive-type well arrangement, the diffusion layers of the collector and emitter portions being formed in a step for forming source and drain diffusion layers of the second conductive-type MOSFET, which constitutes the CMOS circuit as the collector and the emitter and is operated using the

~~first conductive-type well region on which the diffusion layers which constitute the collector and the emitter are formed as a base.~~

9. (Currently Amended) A semiconductor integrated circuit device according to claim 6,

wherein the first conductive-type is a p-type and the second conductive-type is an n-type, and

wherein the [[a]] power source voltage which is supplied from the second external terminal is [[a]] positive. power source voltage.

10. (Currently Amended) A semiconductor integrated circuit device according to claim 9,

wherein the second transistor is constituted ~~of~~by one unit transistor, and

wherein the first transistor is constituted by connecting a plurality of unit transistors corresponding to the second transistor in parallel.

11. (Currently Amended) A semiconductor integrated circuit device according to claim 10,

wherein the first transistor is configured such that the plurality of unit transistors are formed on portions of

the first conductive-type well regions arrangement having the same depth., and

~~one of the plurality of unit transistors which are formed to have the same constitution as the first transistor is used as the second transistor.~~

12. (Currently Amended) A semiconductor integrated circuit device according to claim 11, ~~wherein the semiconductor integrated circuit device further includes:~~ comprising:

a power source circuit which generates an internal voltage, different from [[a]] ~~the~~ power source voltage which is supplied from the second external terminal, upon receiving ~~based on~~ a reference voltage ~~formed by~~ from the reference voltage generating circuit;

an internal circuit which is operated by the power source circuit;

an input circuit which is operated upon receiving a based on the power source voltage supplied from the second external terminal, ~~performs to perform~~ a level conversion upon receiving ~~of~~ an input signal supplied from ~~an-a third~~ external terminal and to ~~transmits~~ the converted input signal to the internal circuit; and

an output circuit which is operated upon receiving
~~abased on the power source voltage supplied from the second~~
~~external terminal, performs to perform~~ a level conversion
~~upon receiving of~~ a signal generated by the internal
circuit[[],] and to form forms an output signal to be
outputted from the third external terminal,

wherein the differential amplifier circuit is
constituted of by a P-channel MOSFET and an N-channel MOSFET
which are formed in the same process as MOSFETs which
constitute the input circuit and the output circuit. ~~which~~
~~are operated upon receiving a power source voltage supplied~~
~~from the external terminal.~~

13. (Currently Amended) A semiconductor integrated
circuit device according to claim 11, ~~wherein further~~
comprising an internal circuit,

~~wherein the an~~ internal voltage is formed by reducing
the power source voltage supplied from the second external
terminal, and

the internal circuit is formed with a minimum forming
size of a CMOS processing.

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14. (Currently Amended) A semiconductor integrated circuit device according to claim 11, wherein further comprising a the power source circuit,
wherein the power source circuit includes a booster circuit and a negative voltage generating circuit which are operated at a constant voltage formed by using the reference voltage, and

a voltage which is voltages formed by the booster circuit and the negative voltage generating circuit is—are outputted as a gate drive voltage for driving to drive a liquid crystal, a source drive voltage corresponding to image data, and a liquid crystal common electrode drive voltage.

15. (Currently Amended) A semiconductor integrated circuit device according to claim 7,

wherein the first conductive-type is a p-type and the second conductive-type is an n-type, and

[[a]]wherein the power source voltage which is supplied from the second external terminal is [[a]] positive power source voltage.

16. , (Currently Amended) A semiconductor integrated circuit device according to claim 8,

wherein the first conductive-type is a p-type and the second conductive-type is an n-type, and

[[a]]wherein the power source voltage which is supplied from the second external terminal is [[a]] positive. power source voltage.

17. (Currently Amended) A semiconductor integrated circuit device according to claim 15,

wherein the second transistor is constituted of by one unit transistor, and

wherein the first transistor is constituted by connecting a plurality of unit transistors corresponding to the second transistor in parallel.

18. (Currently Amended) A semiconductor integrated circuit device according to claim 16,

wherein the second transistor is constituted of by one unit transistor, and

wherein the first transistor is constituted by connecting a plurality of unit transistors corresponding to the second transistor in parallel.

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